

Claim 19 (New):

A method for treating or controlling neurogenetic disorders in an individual comprising the administration of a therapeutically effective amount of a composition comprising an anti-convulsant agent and a pharmaceutically acceptable carrier,

wherein said neurogenetic disorders are selected from the group consisting of hereditary ataxias and related disorders, Friedreich ataxia, ataxia telangiectasia, olivopontine cerebellar degeneration, Ramsay Hunt syndrome, abetalipoproteinemia, Machado-Joseph disease, familial spastic paraparesis, movement disorders, juvenile Huntington disease, dystonias, blepharospasm, spasmodic torticollis, tremor, myoclonus, Hallervorden-Spatz disease, phakomatoses, neurocutaneous syndromes, neurofibromatosis, tuberous sclerosis, Sturge-Weber, Von Hippel-Landau disease, mitochondrial encephalomyopathies, MRLAS syndrome, Kearns-Sayre, Leigh disease, hereditary disorders of nerve and muscle, infantile spinal muscular atrophy, Charcot-Marie-Tooth disease, hereditary sensory and autonomic neuropathies, genetic myasthenic syndromes, metabolic myopathies, muscular dystrophies, myotonias, Laurence-Moon-Bardet-Biedl syndrome, Aicardi, Sjogren-Larsson syndrome, Prader-Willi syndrome, Angelman syndrome, gouging, oppositional behavior, and obsessive ruminations.

Claim 20 (New):

The method according to claim 19, wherein said neurogenetic disorder is oppositional behavior.

Claim 21 (New):

The method according to claim 19, wherein said neurogenetic disorder is Prader-Willi syndrome.

Claim 22 (New):

The method according to claim 19, wherein said neurogenetic disorder is obsessive ruminations.

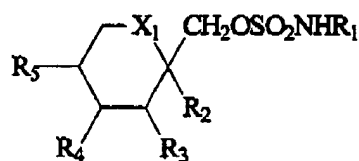
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Claim 23 (New):

The method according to claim 19, wherein said anti-convulsant agent is selected from the group consisting of:



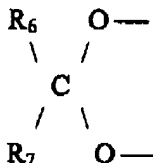
(Formula I)

wherein

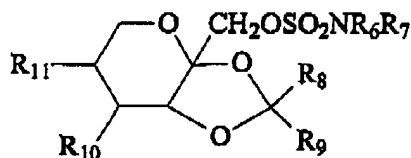
X_1 is CH_2 or oxygen;

R_1 is hydrogen or alkyl; and

R_2 , R_3 , R_4 , and R_5 are independently hydrogen or lower alkyl and, R_2 and R_3 and/or R_4 and R_5 together may be a methylenedioxy group of the following formula:



wherein R_6 and R_7 are the same or different and are hydrogen, lower alkyl or are alkyl and are joined to form a cyclopentyl or cyclohexyl ring,



(Formula II)

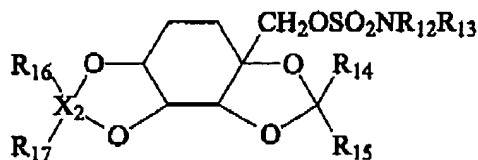
wherein R_6 and R_7 may be the same or different and are hydrogen or C_1 to C_4 alkyl;

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Topo max = elected species

wherein R_8 and R_9 may be the same or different and are hydrogen or C_1 to C_4 alkyl;

wherein R_{10} and R_{11} may be the same or different and are azido, halogen, hydroxyl, sulfamoyl (H_2NSO_2O), C_1 to C_4 alkoxy, C_1 to C_4 alkyl thiocarbonate ($RSC(O)O$), C_1 to C_4 alkyl carbonate ($ROC(O)O$), or C_1 to C_4 alkyl carboxylate ($RC(O)O$), wherein R is C_1 to C_4 alkyl,

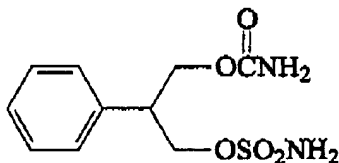


(Formula III)

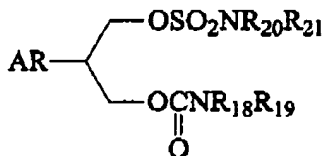
wherein R_{12} and R_{13} may be the same or different and are hydrogen, alkyl (C_1 to C_6), cycloalkyl (C_3 - C_7), allyl, or benzyl;

R_{14} and R_{15} are the same or different and selected from hydrogen or lower alkyl; and

X_2 may be chosen from carbon (C) or sulfur (S), with the stipulation that when X_2 is carbon, R_{16} and R_{17} are the same or different and are selected from hydrogen or lower alkyl, whereas when X_2 is sulfur one of R_{16} and R_{17} is oxygen and the other is a lone pair of electrons or both R_{16} and R_{17} are oxygen,



(Formula IV), and



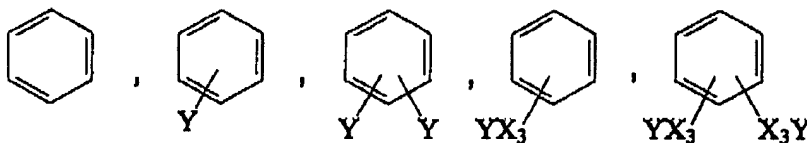
(Formula V)

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wherein, AR is represented by the following formulas;



Y is selected from the group consisting of halogens, trifluoromethyl and alkyl groups containing 1 to 3 carbon atoms when Y alone is attached to the benzene ring; or

when X₃, which may be S or O, is present, Y is selected from the group consisting of trifluoromethyl and alkyl groups containing 1 to 3 carbon atoms; and

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R₁₈, R₁₉, R₂₀, and R₂₁, may be identical or different and are selected from the group consisting of hydrogen, linear or branched alkyl groups containing 1 to 16 carbon atoms, cyclic alkyl groups containing 3 to 16 carbon atoms and aryl groups containing 6 to 8 carbon atoms, and NR₁₈R₁₉ and NR₂₀R₂₁, which may be identical or different, each may form a 3 to 7-membered aliphatic cyclic compound together with another nitrogen atom or oxygen atom.

Claim 24 (New):

The method according to claim 19, wherein the therapeutically effective amount is about 0.1 to 400 mg.

Claim 25 (New):

The method according to claim 19, wherein the therapeutically effective amount is about 10 to 200 mg.

Claim 26 (New):

The method according to claim 19, wherein the therapeutically effective amount is about 25 mg.

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Claim 27 (New):

The method according to claim 23, wherein the therapeutically effective amount is about 0.1 to 400 mg.

Claim 28 (New):

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The method according to claim 23, wherein the therapeutically effective amount is about 10 to 200 mg.

Claim 29 (New):

The method according to claim 23, wherein the therapeutically effective amount is about 25 mg.
